Industry Profiles

Mining and Oil and Gas Extraction Industry

Alberta Human Resources and Employment

Overview:

The Mining and Oil and Gas Extraction industry[1] in Alberta includes companies involved in:

- Exploring for crude petroleum and natural gas
- Drilling, completing and equipping wells
- Operating separators, emulsion breakers, desilting equipment and field gathering lines for crude petroleum
- Mining for coal, metal ore, and non metallic mineral mining and quarring
- Other activities in the preparation of oil and gas up to the point of shipment from the producing property

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[1] Based on Government of Canada statistics and projections for the North American Industry Classification System (NAICS) groups 211, 212, 213.

Section A: Business Environment

1. Employment and Unemployment Numbers and Rates:

All numbers are based on annual averages in 2005

- Employed Albertans = 1,784,400 people
- Albertans employed in Mining, Oil and Gas Extraction = 122,600 people
- This industry employs about 6.9% of all employed Albertans
- Unemployed Albertans = 73,100 people
- Albertans unemployed in Mining, Oil and Gas Extraction = 3,400 people
- Alberta's unemployment rate = 3.9%
- Mining, Oil and Gas Extraction unemployment rate = 2.7 %

For more information on employment numbers or for a historical comparison, go to the Labour Force Survey or Statistics Canada websites.

2. Industry Growth:

- The Mining and Oil and Gas Extraction industry is expected to grow on average 2.5% annually from 2005 to 2010.
- Employment is expected to increase to 138,662 by 2010.
- This industry will provide 8.7% of new jobs in Alberta between 2005 and 2010.

Adapted from the Alberta Modified COPS Outlook (2005-2010).

Industry Productivity

- Contributed $83.00 Real Gross Domestic Product (GDP) per hour worked in 2004 or $189,159 Real GDP per worker.
- In comparison, Alberta's Real GDP was $39.60 per hour worked or $73,549 Real GDP per worker.

For more information see the Labour Productivity in Alberta report online.

Outlook

Forecasts are predicting strong growth in Alberta's Mining and Oil and Gas Extraction industry. Although energy prices are not likely to remain at the record high levels reached in 2005, there is general agreement that the global energy market has moved into an era of higher prices.

Conventional crude oil production is likely to decline, however, bitumen, synthetic crude and natural gas liquids are expected to grow. Crude oil extraction in Alberta will continue to shift away from a drilling operation to a mining operation as the oilsands continue their strong growth. A recent study by the Canadian Association of Petroleum Producers concluded that output from the Athabasca oilsands will grow to three-quarters of Canada's total production in 10 years, reaching nearly 2.7 million barrels a day by 2015, compared to the current level of 1.1 million barrels a day.

Spurred by high energy prices and a growing focus on natural gas from coal, drilling in Alberta is expected to rise by 6% in 2006. A Petroleum Services Association of Canada (PSAC) forecast is predicting that a total of 25,290 wells will be drilled in Canada in 2006, with 20,000 of those being in Alberta. However, PSAC predicts that a shortage of workers could limit further growth.

The National Energy Board predicts explosive growth in Alberta's Coalbed Methane industry. Total Western Canadian output is forecast to rise to 17.3 billion cubic feet a day in 2007 from a current average of 17 billion. Without coalbed methane, western output is forecast to drop to 16 billion cubic feet a day in 2007 from 16.3 billion in 2005. Nearly 80% of conventional natural gas supplies and virtually all coal gas are produced in Alberta.

The Canada West Foundation's report *Coming Up Next* expects coal mining to continue to strengthen over the medium-term due to the additional energy required by Alberta's fast-growing economy. Its long-term future is uncertain. There are growing pressures to reduce carbon emissions. Research into clean coal technology is being done by the Canadian Clean Power Coalition. Clean coal technology could be one of the most important tools in reducing greenhouse gas emissions.

3. Company Size

Establishment Size	Alberta Businesses		Mining and Oil and Gas Extraction	
Less than 20 employees	505,700	35.0%	26,500	24.3%
20 to 99 employees	501,600	34.7%	33,900	31.1%
100 to 500 employees	278,200	19.2%	24,800	22.8%
Over 500 employees	161,200	11.1%	23,800	21.8%

Data Source: Labour Force Survey Historical Review 2005, Statistics Canada

*Fishing, Mining, Oil and Gas is grouped with Forestry and Logging with Support Activities for establishment size

Section B: Human Resources Profile

1. Occupational Information

Some examples of occupations that can be found in the Mining and Oil and Gas Extraction industry include:

- Mining Engineer
- Blaster
- Drilling and Service Rig Managers
- Petroleum Engineer
- Drilling Rig Leasehand/Floorhand

For a complete listing of all occupations related to this industry as well as detailed information on educational and skill requirements, visit the Alberta Occupational Profiles website.

2. Demographics: Age and Gender

Gender in the Mining and Oil and Gas Extraction industry:

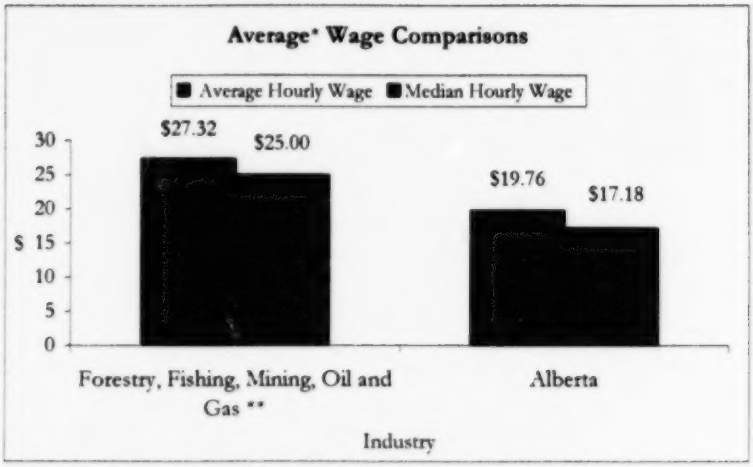
- Women employed: 24,900 people (20.3%)
- Men employed: 97,700 people (79.7%)

In comparison, women comprise 45% of the total employed in Alberta and men make up 55% of the employed.

Age Characteristics	Alberta Employees		Mining and Oil and Gas Extraction	
	Number	%	Number	%
15- 24 years	311,800	17.5%	16,900	13.8%
25-54 years	1,236,400	69.3%	94,600	77.2%
55 years and over	236,200	13.2%	11,100	9.1%

Data Source: Labour Force Survey Historical Review 2005, Statistics Canada

3. Wages



Data Source: Labour Force Historical Review 2005, Statistics Canada
*Average represents the arithmetic mean
**Forestry and Logging is grouped in with Mining and Oil and Gas Extraction

Wage and Salary Information for Selected Occupations

Occupation	Average Hourly Wage			Overall Average Salary
	Starting	After 3 years	Top	
Petroleum Engineers	$ 32.71	$ 45.41	N/A†	$ 123,797
Oil and Gas Well Drilling Workers and Services Operators	$ 19.81	$ 21.08	$ 33.02	$ 61,623
Truck Drivers	$ 17.59	$ 20.51	$ 19.03	$ 47,411

Data Source: 2005 Wage and Salary Survey
*Average represents the arithmetic mean
†N/A due to insufficient response

For more information on wages, job descriptions, duties, required skills and educational requirements for specific occupations in the Mining and Oil and Gas Extraction industry refer to the Wage and Salary Survey online.

Section C: Additional Information

1. Links to Selected Industry Associations:

- Canadian Association of Oilwell Drilling Contractors
- Canadian Association of Petroleum Producers
- Canadian Institute of Mining, Metallurgy and Petroleum
- Coal Association of Canada
- Petroleum Human Resource Council of Canada
- Petroleum Services Association of Canada
- Petroleum Technology Alliance Canada

2. Link to Government Library Database:

http://acscinfolink.gov.ab.ca/libraries/workplace/